

Chapter S: Summary

S.1 Description of Proposed Action

The proposed Southern Corridor would be a four-lane, limited-access highway beginning at Interstate 15 (I-15) about 2 miles north of the Arizona border near the southwest end of St. George (at the proposed Atkinville interchange) and connecting with State Route 9 (SR 9) near Hurricane (see Figure 2-9, Southern Corridor 4300 West, 3400 West, and 2800 West Alternatives). The entire project is located within Washington County, Utah. Depending on the alternative selected, the highway would be between 20 and 26 miles in length. A multiple-use trail for pedestrians, bicyclists, and equestrians would parallel the highway.

The primary purpose of the Southern Corridor is to provide a regional transportation facility between St. George, Washington City, and Hurricane that would complement local land use plans.

S.2 Other Major Actions

The other major transportation action in the study area is a new interchange at Reference Post 13 (RP 13) on I-15 in Washington City. Other future major non-transportation actions in the study area would include Bureau of Land Management (BLM) land transfers, the construction and operation of the Sand Hollow Reservoir and Recreation Area, and the construction and operation of the proposed St. George replacement airport adjacent to the proposed Southern Corridor. If approved, the proposed airport is expected to be operational by 2010.

A major past environmental action in the project area is the creation of the Red Cliffs Desert Reserve. A Habitat Conservation Plan has been prepared to provide a comprehensive approach to protecting and recovering the Mojave desert tortoise and other sensitive plant and wildlife species and their habitat from the direct and indirect impacts of human activities. The Habitat Conservation Plan provides a means for orderly growth and development in Washington County. As part of the plan, a 61,022-acre reserve roughly north of St. George was established.

S.3 Alternatives Considered

As part of the initial screening process, potential options for study areas in the Southern Corridor region were evaluated to determine whether they would meet the project's purpose and need. The proposed facility must operate as a regional

facility for traffic between St. George, Washington City, and Hurricane; must be compatible with land use plans; and must improve mobility and access to planned development. Based on these needs, a study area south and east of I-15 was selected. The majority of future growth in the region is expected to occur in this area (see Figure 2-3, Regional Alignment).

To facilitate the selection of alternatives, meetings were held with federal and state agencies, local county and city officials, and the public. During these meetings, the participants developed and considered various alignment options. A map showing environmental constraints such as washes, sensitive species, cultural resources, and geotechnical constraints was shown to participants for their consideration while developing alternatives.

Based on the project's purpose and need, the known environmental constraints, and input from the public, three alternatives were developed in addition to the No-Build (or No-Action) Alternative. For the purposes of this analysis, these three alternatives are called the 4300 West Alternative, 3400 West Alternative, and 2800 West Alternative. From I-15 to an area about 4 miles south of SR 9, the three alternatives are identical. At this point, the alternatives connect to SR 9 at three different locations. Each of these locations was selected based on planned development and planned recreation facilities.

In addition to these four alternatives, another option was considered for the I-15 connection to the Southern Corridor. Although the Southern Corridor alternatives are placed to avoid habitat for sensitive plant species, this alternative would be located north of the endangered Holmgren milkvetch habitat (see Figure 2-6, Other Alternative Considered). This alternative was not carried forward because it required out-of-direction travel that did not meet the purpose and need, would not align with other proposed transportation improvements, would not be compatible with local land use plans, and would potentially affect a residential area, additional endangered bearclaw poppy habitat, and land proposed for industrial development.

S.3.1 Alternatives Studied in Detail

This Environmental Impact Statement (EIS) evaluates four alternatives: No-Build, 4300 West, 3400 West, and 2800 West. The three build alternatives are shown in Figure 2-9, Southern Corridor 4300 West, 3400 West, and 2800 West Alternatives. All build alternatives would include a trail system for pedestrians, bicyclists, and equestrians.

S.3.1.1 No-Build Alternative

The Council on Environmental Quality (CEQ) regulations (1981) require that an EIS include a “no-action” (or “no-build”) alternative which, in this case, consists of not building the Southern Corridor. The No-Build Alternative would consist of improving and expanding the existing arterial system and adding a new interchange on I-15 at RP 13 in Washington City. The No-Build Alternative would be implemented as part of the cities’ future transportation planning to meet the expected growth by providing access to new developments as they are built.

S.3.1.2 4300 West Alternative

The 4300 West Alternative would start at the I-15 interchange at about RP 2 and would extend 20 miles to the intersection of 4300 West with SR 9 near Hurricane. This alternative is the most westerly on SR 9. It would include approximately 11 interchanges on the Southern Corridor.

S.3.1.3 3400 West Alternative

The 3400 West Alternative would start at the I-15 interchange at about RP 2 and extend 22 miles to the intersection of 3400 West with SR 9 near Hurricane. This alternative would include approximately 10 interchanges on the Southern Corridor.

S.3.1.4 2800 West Alternative (Preferred Alternative)

The 2800 West Alternative would start at the I-15 interchange at about RP 2 and extend 26 miles to the intersection of 2800 West with SR 9 in Hurricane. This alternative is the most easterly on SR 9. It would include approximately 12 interchanges on the Southern Corridor.

S.4 Summary of Environmental Impacts

Table S.4-1, Comparison of Environmental Impacts, on page S-7 presents the major environmental impacts from each alternative evaluated. Provided below are the major advantages and disadvantages of each alternative.

S.4.1 No-Build Alternative

S.4.1.1 Primary Advantages of the No-Build Alternative

The major advantage of the No-Build Alternative compared to the build alternatives is that there would be no environmental impacts associated with building the Southern Corridor. However, about 400 acres of new local roadway

would likely be required. This construction would still result in less overall impervious surface compared to the build alternatives. The No-Build Alternative would cause fewer impacts to wildlife habitat and cultural resources.

S.4.1.2 Primary Disadvantages of the No-Build Alternative

The major disadvantage of the No-Build Alternative is that it would not satisfy the project's purpose and need, which is providing a regional transportation facility between St. George, Washington City, and Hurricane. Other disadvantages of the No-Build Alternative are as follows:

- It would not allow the communities in the area to plan, develop, and manage an efficient transportation system for the anticipated growth in the region.
- It could allow continued impacts to the Warner Ridge population of the endangered bearclaw poppy. The build alternatives would provide some protection for this species by limiting access to Warner Ridge.

S.4.2 4300 West Alternative

S.4.2.1 Primary Advantages of the 4300 West Alternative

- Least amount of right-of-way (ROW) required
- Along with the 2800 West Alternative, the fewest relocations required
- Along with the 3400 West Alternative, the fewest acres of grazing allotments affected
- Fewest visual impacts
- The least amount of wildlife habitat impacted

S.4.2.2 Primary Disadvantages of the 4300 West Alternative

- Highest number of cultural resources affected
- Second-most acres of farmland affected (1 acre)
- Second-highest construction cost (\$161,460,000)
- Potential impact to bald eagle roost

S.4.3 3400 West Alternative

S.4.3.1 Primary Advantages of the 3400 West Alternative

- Along with the 4300 West Alternative, the fewest acres of grazing allotments affected
- Lowest construction cost (\$151,640,000)

S.4.3.2 Primary Disadvantages of the 3400 West Alternative

- Highest number of farmland acres affected (50 acres)
- Highest number of groundwater wells affected
- Second-highest number of cultural resources affected
- Second-highest amount of wildlife habitat affected
- Greatest visual impacts
- Conflicts with proposed Outlaw Ridge development

S.4.4 2800 West Alternative (Preferred Alternative)

S.4.4.1 Primary Advantages of the 2800 West Alternative

- No farmland impacts
- Fewest cultural resources affected
- Fewest hazardous waste sites along the ROW
- Along with the 4300 West Alternative, the fewest relocations required
- Fewest number of groundwater wells affected

S.4.4.2 Primary Disadvantages of the 2800 West Alternative

- The most recreational resources affected
- Highest cost (\$209,160,000)
- The most acreage of grazing allotments affected
- Highest amount of wildlife habitat affected
- Greatest amount of ROW required
- Potential impact to golden eagle nest

S.4.5 Basis for Selection of Preferred Alternative

The selection of the Preferred Alternative was based on public and city support and environmental impacts. The 2800 West Alternative is supported by Hurricane City and had the most support by local residents. The Hurricane City Council and Planning Commission support the 2800 West Alternative for the following reasons:

- Fewer property owners involved
- Improved access to recreation sites and projected future development
- Better opportunities for east-west connection from Hurricane
- Best location for connection to SR 9 because of safer access and proximity to the main part of Hurricane
- Lowest number of cultural sites affected

The environmental impacts of the three build alternatives are similar, with the main difference being the total number of acres of wildlife habitat affected. The 2800 West Alternative would convert the greatest amount of wildlife habitat to roadway use. Because the environmental impacts from the 2800 West Alternative and the other build alternatives are similar for most resources, and because the 2800 West Alternative has the support of the public and the local community, it was selected as the Preferred Alternative.

Table S.4-1. Comparison of Environmental Impacts

Resource Category	No-Build Alternative	4300 West Alternative	3400 West Alternative	2800 West Alternative (Preferred Alternative)
Land Use	<p>The general land use character in the project area would change from rural to urban.</p> <p>This alternative is not consistent with the Washington City and St. George land use plans. It is consistent with the Hurricane and Washington County land use plans.</p>	<p>The general land use character in the project area would change from rural to urban. Changes in land use could occur faster along the Southern Corridor than under the No-Build Alternative.</p> <p>This alternative is consistent with the Washington City and St. George land use plans. It is not identified in Hurricane and Washington County land use plans. However, Hurricane and county planners support the project. The project is in conformance with the BLM Resource Management Plan.</p>	<p>The general land use character in the project area would change from rural to urban. Changes in land use could occur faster along the Southern Corridor than under the No-Build Alternative.</p> <p>This alternative is consistent with the Washington City and St. George land use plans. It is not identified in Hurricane and Washington County land use plans. However, Hurricane and county planners support the project. The project is in conformance with the BLM Resource Management Plan.</p>	<p>The general land use character in the project area would change from rural to urban. Changes in land use could occur faster along the Southern Corridor than under the No-Build Alternative.</p> <p>This alternative is consistent with the Washington City and St. George land use plans. It is not identified in Hurricane and Washington County land use plans. However, Hurricane and county planners support the project. The project is in conformance with the BLM Resource Management Plan.</p>
Farmland	<p>Development of local roads would likely affect less than 10 acres. No impacts to grazing allotments.</p>	<p>1 acre of unique farmland affected; 257 acres of grazing allotments directly affected. Indirect impacts caused by bisecting allotments.</p>	<p>50 acres of prime farmland affected; 257 acres of grazing allotments directly affected. Indirect impacts caused by bisecting allotments.</p>	<p>No farmland affected; 385 acres of grazing allotments directly affected. Indirect impacts caused by bisecting allotments.</p>
Social Environment	<p>No environmental justice impacts expected. Community cohesion would decrease without a regional transportation facility. The lack of a regional transportation facility would affect travel patterns and accessibility in the project area. Local transportation projects would not affect recreational resources.</p>	<p>No environmental justice impacts. No change in community cohesion. This alternative would improve overall travel patterns and accessibility in the project area. It would affect access to 2 trails and use of 1 recreation site.</p>	<p>No environmental justice impacts. No change in community cohesion. This alternative would improve overall travel patterns and accessibility in the project area. It would affect access to 2 trails and use of 1 recreation site.</p>	<p>No environmental justice impacts. No change in community cohesion. This alternative would improve overall travel patterns and accessibility in the project area. It would affect access to 3 trails and the Sand Mountain Recreation Area and use of 1 recreation site.</p>
Relocations	<p>No relocations expected.</p>	<p>1 residential relocation.</p>	<p>4 residential relocations.</p>	<p>1 residential relocation.</p>

Resource Category	No-Build Alternative	4300 West Alternative	3400 West Alternative	2800 West Alternative (Preferred Alternative)
Economics	Could result in economic impacts by not providing a regional transportation facility to improve mobility between St. George, Washington City, and Hurricane.	This alternative could result in positive economic impacts by improving mobility to the southern part of the study area where growth is expected. The Southern Corridor would result in small bypass impacts to local cities.	This alternative could result in positive economic impacts by improving mobility to the southern part of the study area where growth is expected. The Southern Corridor would result in small bypass impacts to local cities.	This alternative could result in positive economic impacts by improving mobility to the southern part of the study area where growth is expected. The Southern Corridor would result in small bypass impacts to local cities.
Joint Development	No joint development potential.	Southern Corridor pedestrian and bicycle trail would be incorporated into the local trail system. Highway would be jointly coordinated with BLM.	Southern Corridor pedestrian and bicycle trail would be incorporated into the local trail system. Highway would be jointly coordinated with BLM.	Southern Corridor pedestrian and bicycle trail would be incorporated into the local trail system. Highway would be jointly coordinated with BLM.
Considerations Related to Pedestrians and Bicyclists	Southern Corridor trail would not be constructed. Continued increase in the number of pedestrian and bicycle trails.	Southern Corridor trail implemented along with other trails in the project area.	Southern Corridor trail implemented along with other trails in the project area.	Southern Corridor trail implemented along with other trails in the project area.
Air Quality	No change expected in current attainment status. Vehicle-related emissions for particulate matter (PM ₁₀), nitrogen oxides (NO _x), and sulfur dioxide (SO ₂) would be less than under the build alternatives. Volatile organic compounds (VOCs) and carbon monoxide (CO) emissions would be slightly greater than under the build alternatives.	National Ambient Air Quality Standards would not be exceeded. Increase in PM ₁₀ , NO _x , and SO ₂ compared to the No-Build Alternative. Highest overall emissions of the build alternatives.	National Ambient Air Quality Standards would not be exceeded. Increase in PM ₁₀ , NO _x , and SO ₂ compared to the No-Build Alternative.	National Ambient Air Quality Standards would not be exceeded. Increase in PM ₁₀ , NO _x , and SO ₂ compared to the No-Build Alternative. Lowest overall emissions of the build alternatives.
Noise	Noise levels around local transportation projects would increase. The noise environment in the general project area would change from rural to urban. Noise levels near Warner Ridge would likely remain rural.	Southern Corridor would increase noise levels on adjacent land. The noise environment would change from rural to urban. Noise levels would exceed 65 dBA, or would increase by 10 dBA or more, at 7 noise-sensitive receptors.	Southern Corridor would increase noise levels on adjacent land. Noise levels would exceed 65 dBA, or would increase by 10 dBA or more, at 7 noise-sensitive receptors.	Southern Corridor would increase noise levels on adjacent land. Noise levels would exceed 65 dBA, or would increase by 10 dBA or more, at 7 noise-sensitive receptors.

Resource Category	No-Build Alternative	4300 West Alternative	3400 West Alternative	2800 West Alternative (Preferred Alternative)
Water Quality	Implementation of best management practices would minimize surface water quality impacts. Overall, less impervious surface (400 acres) would be required compared to the build alternatives. No impacts to groundwater quality. 15 groundwater wells affected.	Implementation of best management practices would minimize surface water quality impacts. No impacts to groundwater quality. 14 groundwater wells affected. Direct increase in impervious surface of 779 acres. Indirect increase of 150 acres.	Implementation of best management practices would minimize surface water quality impacts. No impacts to groundwater quality. 19 groundwater wells affected. Direct increase in impervious surface of 846 acres. Indirect increase of 150 acres	Implementation of best management practices would minimize surface water quality impacts. No impacts to groundwater quality. 8 groundwater wells affected. Direct increase in impervious surface of 1,009 acres. Indirect increase of 150 acres.
Wetlands/Waters of the U.S.	No wetlands affected. Several waters of the U.S. (dry washes) would be crossed.	No wetlands affected. Flows into waters of the U.S. (dry washes) would be controlled to maintain hydraulic capacity.	No wetlands affected. Flows into waters of the U.S. (dry washes) would be controlled to maintain hydraulic capacity.	No wetlands affected. Flows into waters of the U.S. (dry washes) would be controlled to maintain hydraulic capacity.
Water Body Modification and Wildlife	No impacts to water bodies. 400 acres of desert shrub/scrub habitat would be lost to construction. Loss of habitat would result in direct and indirect effects on local wildlife. Potential impacts to golden eagle nest.	No impacts to water bodies. 779 acres of desert shrub/scrub habitat would be lost to construction. Indirect impacts to 150 acres. Loss of habitat would result in direct and indirect effects on local wildlife.	No impacts to water bodies. 846 acres of desert shrub/scrub habitat would be lost to construction. Indirect impacts to 150 acres. Loss of habitat would result in direct and indirect effects on local wildlife.	No impacts to water bodies. 1,009 acres of desert shrub/scrub habitat would be lost to construction. Indirect impacts to 150 acres. Loss of habitat would result in direct and indirect effects on local wildlife. Golden eagle nest next to ROW could be affected by construction.
Floodplains	No significant encroachment on floodplains.	No significant encroachment on floodplains.	No significant encroachment on floodplains.	No significant encroachment on floodplains.
Threatened and Endangered Species	Likely to adversely impact 3 endangered plant species. Construction of a road at 4300 West could affect bald eagle roost. Potential impact to southwestern willow flycatcher with widening of roads over the Virgin River. This alternative would not provide a barrier to protect the Warner Ridge population of endangered bearclaw poppy from recreation activities.	Likely to adversely impact 3 endangered plant species and the desert tortoise. Project may affect, but is not likely to adversely affect, two fish species. Bald eagle roost next to ROW could be affected during construction. This alternative would help BLM provide a barrier to protect the Warner Ridge population of endangered bearclaw poppy from recreation activities.	Likely to adversely impact 3 endangered plant species and the desert tortoise. Project may affect, but is not likely to adversely affect, two fish species. This alternative would help BLM provide a barrier to protect the Warner Ridge population of endangered bearclaw poppy from recreation activities.	Likely to adversely impact 3 endangered plant species and the desert tortoise. Project may affect, but is not likely to adversely affect, two fish species. This alternative would help BLM provide a barrier to protect the Warner Ridge population of endangered bearclaw poppy from recreation activities.

Resource Category	No-Build Alternative	4300 West Alternative	3400 West Alternative	2800 West Alternative (Preferred Alternative)
Historic, Archaeological, and Paleontological Resources	Potential for impacts on up to 8 National Register of Historic Places (NRHP) archaeological sites and up to 4 paleontological sites.	Impacts on 2 potentially eligible and 20 eligible NRHP archaeological sites and 4 paleontological sites.	Impacts on 21 eligible NRHP archaeological sites and 4 paleontological sites.	Impacts on 2 potentially eligible and 18 eligible NRHP archaeological sites and 4 paleontological sites.
Hazardous Waste Sites	3 hazardous waste sites potentially affected within or adjacent to local road projects.	5 hazardous waste sites within or adjacent to the ROW would be affected.	5 hazardous waste sites within or adjacent to the ROW would be affected.	3 hazardous waste sites within or adjacent to the ROW would be affected.
Visual Resources	Local transportation projects would reduce the visual environment of the project area.	Southern Corridor would reduce the overall visual environment. Visual impact rating of 1.53.	Southern Corridor would reduce the overall visual environment. Visual impact rating of 1.59.	Southern Corridor would reduce the overall visual environment. Visual impact rating of 1.56.
Section 4(f)/6(f) Properties	None	None	None	None

S.5 Areas of Controversy

During the public scoping process for the EIS, no areas of controversy were identified regarding the Southern Corridor. However, during the public comment period on the Draft EIS, a number of comments were received regarding impacts from the Southern Corridor and regional growth (cumulative impacts) on threatened and endangered plant species habitat. In response to these comments, FHWA reinitiated formal consultation with USFWS as required by Section 7 of the Endangered Species Act.

S.6 Major Unresolved Issues

There are no major unresolved issues with government agencies.

S.7 Required Federal Actions

The following federal actions would be required for the proposed Southern Corridor:

- Clean Water Act Review, Section 404 (U.S. Army Corps of Engineers)
- Endangered Species Act Review, Section 7 (U.S. Fish and Wildlife Service)
- Approval of ROW access across public lands (Bureau of Land Management)
- Section 106 Agreement/Approval (Utah State Historic Preservation Office)
- Section 309 Review (U.S. Environmental Protection Agency)
- Approval for Atkinville Interchange (RP 2) (Federal Highway Administration)

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